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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,034	08/18/2003	Chandrasekhar Narayanaswami	YOR920030124US1	3226

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EXAMINER

BLACKMAN, ANTHONY J

ART UNIT	PAPER NUMBER
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2676

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/643,034

Applicant(s)

NARAYANASWAMI ET AL.

Examiner

ANTHONY J BLACKMAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 18 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/18/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant is required to provide explanations for the following terms that are not clearly defined claimed subject matter, AVERAGE, MAX, ADD, and TOP. Examiner will interpret claim limitations above as best understood.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:
4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1-19 are rejected under 35 U.S.C. 102(e) as being anticipated by BERGSTROM et al, US Patent No. 6,801,213.

6. As per claim 1, examiner interprets BERGSTROM et al to disclose A method for transforming multiple one-bit per pixel images for presentation on a device (col 5, lines 13-20, col 15, lines 1-10 and 29-41, col 20, line 65-col 21, line 15 and col 3, lines 18-28, further, the group of sub-pixels, sub-images and monochrome data/displays are analogous to one-bit data as claimed), comprising steps of.

a) converting the one-bit per pixel images to multiple bits per pixel images (col 5, lines 13-20, col 15, lines 1-10 and 29-41, col 20, line 65-col 21, line 15 and col 3, lines 18-28);

b) overlapping the multiple bits per pixel images, according to an overlap function, to create a composite multiple bits per pixel image (col 5, lines 13-20, col 15, lines 1-10 and 29-41, col 20, line 65-col 21, line 15 and col 3, lines 18-28, further, it is inherent that the overlapping means developing the composite imaging in the creation of the composite processing);

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c) converting the composite multiple bits per pixel image into a dithered one per pixel image by applying a spatial dithering algorithm (spatial dithering and spatial dither algorithms means (see col 25, line 66-col 26, line 18) are analogous to the distributed binary coding (herein referred to as DBC) , disclosing separation and storing color data means (see col 23, line 58-col 24, line 60) and (see col 25, line 67-col 26, line 18) as BERGSTROM et al teaches hardware and software working together in combination with the algorithms of the present invention. Further, spatial dithering is applied by BERGSTROM et al to image data, separating the image data into separate fields.);

d) presenting the dithered one-bit per pixel image on a display (col 15, lines 1-10, col 20, line 65-col 21, line 15 and col 3, lines 18-28, further, the group of sub-pixels, sub-images and monochrome data/displays are displayed as the claimed generated signals).

7. As per claim 2, BERGSTROM et al meet limitations of claim 1, including, wherein step a) further comprises applying a first gray level to a first image and a second gray level to a second image wherein the gray levels are applied so as to create visual distinction between the images (see the dichromic composite static or a four-level grayscale - col 15, lines 29-41).

8. As per claim 3, BERGSTROM et al meet limitations of claim 1, including, step b) further comprises employing an overlap function from among the following: AVERAGE,

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MAX, ADD, and TOP (see col 23, line 58-col 24, line 60 for the Distributed binary coding means (see col 24, lines 46-49) as being analogous to at least the AVERAGE).

9. As per claim 4, BERGSTROM et al, meet limitations of claim 1 wherein steps a), b), and c) are performed in virtual memory (the display matrix is representative of the virtual memory means- see col 5, lines 13-20 and col 17, lines 10-16 and col 20, line 65-col 26, line 15).

10. As per claim 5, BERGSTROM et al, meet limitations of claim 1, wherein step d) further comprises displaying the dithered one-bit per pixel image on a watch face (please see the following; col 1, lines 19-35 and col 8, lines 45-60 discloses teaching development of smaller and smaller display technologies. Therefore, due to the teaching above, it is inherent that the teachings of BERGSTROM et al meet limitations of displaying on a watch-face and further still see col 10, lines 55-62 – disclosing use of microdisplay technology).

11. As per claim 6, BERGSTROM et al meet limitations of claim 1, including, wherein the device is a hand-held information processing system (col 8, lines 45-60, and col 10, lines 55-62 – disclosing use of microdisplay technology).

12. As per claim 7, BERGSTROM et al meet limitations of claim 1, including, wherein the device is a one-bit per pixel computer monitor (col 15, lines 1-10, col 20, line 65-col 21, line 15 and col 3, lines 18-28, further, the group of sub-pixels, sub-images and monochrome data/displays are displayed).

13. As per claim 13, claim 13 is substantially similar to claim 1, including feature 13 (d) generating a signal representing the dithered one-bit per pixel image is substantially similar to 1(d) presenting the dithered one-bit per pixel image on a display.

14. As per claim 14, BERGSTROM et al meet limitations of claim 13, including, wherein the logic comprises memory for storing instructions for performing the steps a), b), c) and d) the display matrix is representative of the virtual memory means controlling the operations of the steps a), b), c) and d) as claimed- see col 5, lines 13-20 and col 17, lines 10-16 and col 20, line 65-col 26, line 15); and a processor for performing the instructions (see fig 19 and col 25, lines 47-56).

15. As per claim 15, claim 15 is substantially similar to claim 4.

16. As per claim 16, . The apparatus of claim 13 further comprising a display for presenting the dithered one-bit per pixel image.

17. As per claim 17, claim 17 is substantially similar to claim 5.

18. As per claim 18, claim 18 is substantially similar to claim 6.

19. As per claim 19, claim 19 is substantially similar to claim 7.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY J. BLACKMAN whose telephone number is 571-272-7779. The examiner can normally be reached on FLEX SCHEDULE.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MATTHEW BELLA can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



ANTHONY J BLACKMAN
Examiner
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